

REMARKS

Claims 1-40 were presented for examination and were pending in this application. In the above-referenced Office Action, the Examiner required formal drawings; rejected claim 20 under 35 U.S.C. § 112, second paragraph; rejected claims 1-9, 13-29, and 33-40 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,292,582 to Lin et al. ("Lin"); rejected claims 10, 11, 30, and 31 under 35 U.S.C. § 103 as being unpatentable over Lin and further in view of the article "The Self-Organizing Map" by Kohonen ("Kohonen"); and rejected claims 12 and 32 under 35 U.S.C. § 103 as being unpatentable over Lin and further in view of the article "The Application of Spatial Signature Analysis Electrical Test Data Validation Study" by Karnowski et al. ("Karnowski").

Claims 1, 20, 21, and 40 are independent claims. Applicants have amended independent claims 1, 20, and 40 and have added new claims 41-44. Applicants now request reconsideration and allowance of pending claims 1-44.

The Examiner required formal drawings. Applicants submit formal drawings herewith.

The Examiner rejected claim 20 under 35 U.S.C. § 112, second paragraph. Applicants have amended claim 20 to correct the antecedent basis problem noted by the Examiner.

The Examiner rejected claims 1-9, 13-29, and 33-40 under 35 U.S.C. § 102(e) as being anticipated by Lin. Independent claim 1 as amended recites a method including a step of classifying, by the data processing system, at least one of the plurality of images in accordance with the extracted features and classes of the training set, the classifier grouping the plurality of images before receiving feedback from a human being. The claim further recites a step of allowing a user to classify ones of the plurality of images. Thus, the classifier (Called the automatic dynamic classifier in applicants' specification) initially classifies the plurality of images before receiving any feedback from the user.

The initial classification is an important aspect of the invention, since it allows the user to initially look at images that have already been organized in some manner. The user does not have to initially wade through thousands of unclassified images.

In contrast, Lin discloses a system in which the user has to do exactly that. The system of Lin causes the user to initially look through and classify a large number of images, which is then input into a trainer. See, for example, col. 20, lines 15-20. This is a slow and time-consuming process. For at least this reason, Lin does not disclose or suggest the method of independent

claim 1. The rejection of independent claim 1 and its dependent claims should be reconsidered and withdrawn for at least this reason.

Independent claim 20 as amended recites a method including classifying, by the data processing system, at least one of the plurality of images in accordance with the extracted features and classes of the training set, the classifying including grouping the plurality of images before receiving feedback from a human being. As discussed above, Lin does not disclose or suggest such a method and the rejection of independent claim 20 and its dependent claims should be reconsidered and withdrawn for at least this reason.

Independent claim 21 recites a system including a software portion configured to allow a user to classify ones of the plurality of images and further recites a software portion configured to send feedback to an inspection system to fine-tune the inspection system in accordance with the user's classification. Applicants note that, in the Office Action, the Examiner neglected to point to a location in Lin that allegedly discloses this feedback aspect of the invention. Applicants do not believe that Lin discloses such as feature. If the Examiner persists in his rejection, he is respectfully requested to point to a specific column and line in Lin where such a teaching can be found. For at least these reasons, the rejection of independent claim 40 should be reconsidered and withdrawn.

Independent claim 40 as amended recites the feedback aspect of the invention as discussed above in connection with claim 21. Claim 40 as amended further recites a portion configured to classify, by the system, at least one of the plurality of images in accordance with the extracted features and classes of the training set, the classifier grouping the plurality of images before receiving feedback from a human being.

As discussed above, performing initial classification of images makes the user's review much easier. As also discussed above, Lin fails to disclose or suggest such a system. For at least this reason, the rejection of independent claim 40 should be reconsidered and withdrawn.

The Examiner rejected claims 10, 11, 30, and 31 under 35 U.S.C. § 103 as being unpatentable over Lin and further in view of Kohonen and rejected claims 12 and 32 under 35 U.S.C. § 103 as being unpatentable over Lin and Karnowski. Claims 10, 11, and 12 depend directly or indirectly from claim 1 and claims 30, 31, and 32 depend directly or indirectly from claim 21. Kohonen and Karnowski completely fail to overcome the above-discussed deficiencies of Lin. Therefore, claims 10, 11, 30, and 31 patentably distinguish over the art of record for at least this reason.

Moreover, applicants disagree with the Examiner's reasoning in finding motivation to combine Lin with either Kohonen or Karnowski. As the Examiner admits, Lin does not disclose use of the techniques of either Kohonen or Karnowski. The mere fact that Kohonen discloses a "creating spatially organized 'internal representation' of various features of input signals" would have been insufficient at the time of the invention to suggest to a person of ordinary skill in the art that he should incorporate Kohonen mapping techniques into the system of Lin. There is no problem suggested in Lin that would have been obvious to solve with Kohonen maps and there is no suggestion in Kohonen itself that it be used in a system for classifying semiconductor defects, as is shown in Lin. Similar arguments apply to the Examiner's suggested motivation with regard to Karnowski.

In any event, since neither Kohonen nor Karnowski remedy the deficiencies of Lin, the Examiner's combination, even if capable of being made, would not yield applicants' invention.

In summary, Applicants respectfully submit that claims 1-44, as presented herein, are patentably distinguishable over the cited reference (including references cited, but not applied). Therefore, Applicants request reconsideration and allowance of these claims.

In addition, Applicants respectfully invite the Examiner to contact Applicants' representative at the number provided below if the Examiner believes it will help expedite furtherance of this application.

RESPECTFULLY SUBMITTED,
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